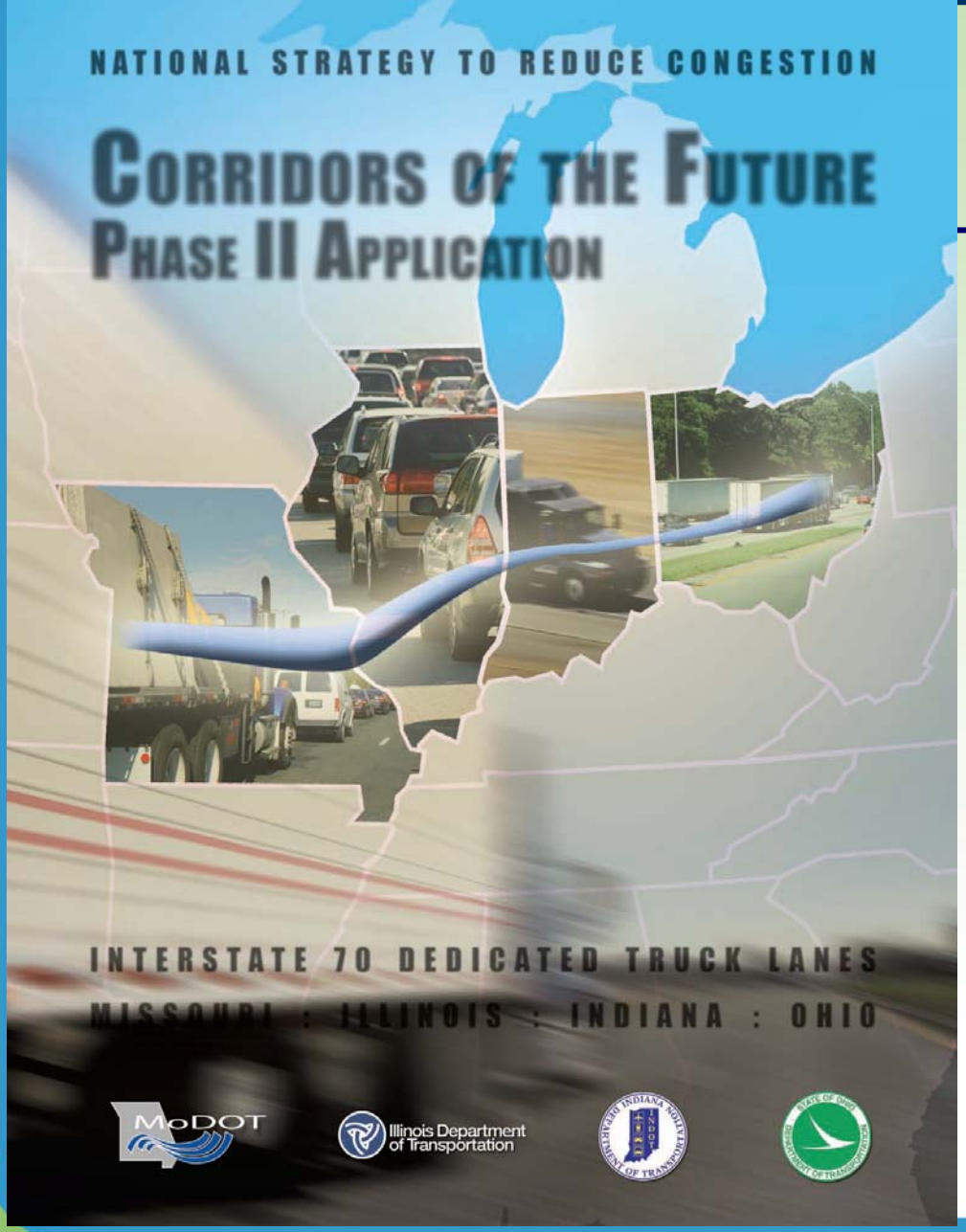


Project Overview

I – 70

Dedicated Truck Lanes

Updated 2/4/2008

Keith J. Bucklew

Indiana Dept. of Transportation

I-70 Dedicated Truck Lane Project

This Presentation

1. Corridors of the Future Program
2. Project Overview
3. Corridor Conditions

   Congestion, safety, economic growth
4. Separation as a Solution
5. Design and Technology - Concepts
6. 4-State Coalition
7. Next Steps

1. Corridors of the Future Program (CFP)

- CFP is an initiative under USDOT's "National Strategy to Reduce Congestion"
  - Explore innovative financing
  - Improve flow of goods
  - Enhance quality of life
- I-70 one of 6 corridors selected and funded
- $5 million discretionary grant from FHWA
  - $2 million to Missouri DOT
  - $3 million for corridor feasibility study

1. Corridors of the Future Program (cont.)

Selection means USDOT / FHWA will help:

- Facilitate and accelerate development of the corridor
  - Through expedited review and approvals
  - By breaking through institutional and regulatory obstacles
  - By promoting efficient environmental review
- Assist in identifying alternative private sector financing approaches and discretionary funding
- Provide access to DOT experts

http://www.fightgridlocknow.gov/corridors.htm#overview

2. CFP Project Overview

- I-70 through MO, IL, IN, OH
- Approx. 800 miles
- Dedicated Truck-Only-Lanes (TOLs)
  - Long-haul focus
  - Reduce congestion
  - Improve safety for trucks and passenger vehicles
- Four state coalition
  - INDOT serves as lead state

Goal: An Efficient, Reliable and Sustainable World Class Transportation System

- Primary Objectives:
  - Reduce Congestion
    - Improve Quality of Life
    - Incorporate existing and future ITS
  - Enhance Mobility & Improve Reliability
    - Strengthen and Sustain national and global supply chains.
    - Incorporate information management solutions
  - Improve Safety
    - Minimize crashes
    - Reduce fatalities and injuries

Goal: An Efficient, Reliable and Sustainable World Class Transportation System

- Secondary Objectives:
  - Enhance Economic Development
    - Improve Quality of Life
    - Motor carrier productivity
  - Reduce impacts to environment, communities and public health
  - Improve Security
    - Freight/Cargo security
    - National Security: Economics and Military
  - Facilitate Multimodal Integration – all modes
    - Improve access and interchangeability
    - Provide seamless connectivity

Project Area

Source: Wilbur Smith generated map using National Transportation Atlas Databases (NTAD) 2006 - Bureau of Transportation Statistics

I-70 Corridor project area connects to:

9 North/South Interstates:

- I-29 and I-35 in the Kansas City, Missouri area
- I-55 in the St. Louis, Missouri area
- I-57 in south central Illinois
- I-65 and I-69 in the Indianapolis, Indiana area
- I-75 north of Dayton, Ohio area
- I-71 in the Columbus, Ohio area
- I-77 near Cambridge, Ohio

2 East/West Interstate Connections:

- I-44 and I-64 in the St. Louis, Missouri area
- I-74 in Indianapolis

I-70 Corridor project area connects to:

- 17 passenger and air cargo airports
- All 7 class 1 U.S. Railroads (cross or parallel I-70)
- Water ports on the Missouri, Mississippi, and Ohio Rivers

Intermodal Facilities

Source: Wilbur Smith Generated Map

3. Corridor Conditions - Congestion

I-70 faces congestion due to capacity deficiencies

Table 1-1: Capacity of the I-70 Corridor

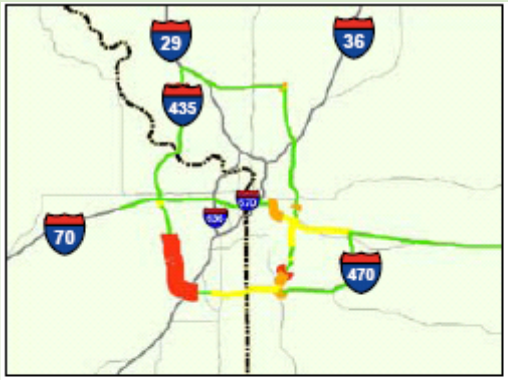
	I-70 Project Area		All US Interstates	
Measure	**Urban**	**Rural**	**Urban**	**Rural**
Centerline Miles	297 (35%)	550 (65%)	15,373 (32%)	31,474 (68%)
Lane Miles	1416 (38%)	2242 (62%)	84,023 (40%)	128,012 (60%)
MVMT	21,936 (55%)	17,763 (45%)	459,768 (63%)	267,395 (37%)

Source: WSA Generated Table from HPMS and State Level Data

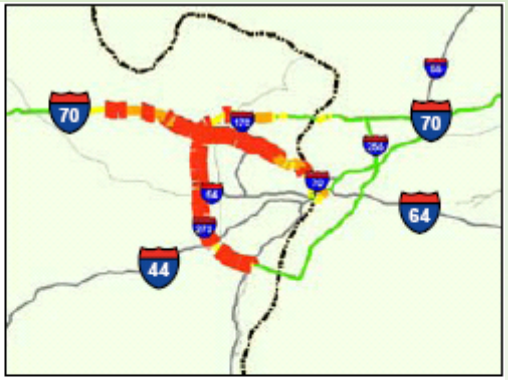
3. Corridor Conditions - Truck Flows 2035

Source:FHWA FAF 2

3. Corridor Conditions - 2030 Urban Area Congestion



Kansas City

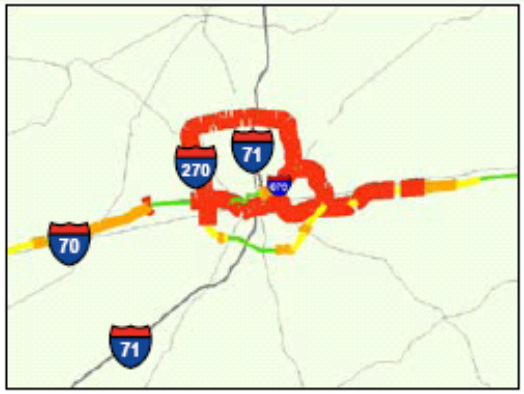


Saint Louis

	Urban	Rural
2004 MVMT	55,379	18,527
% of VMT Deficient in 2004	21.55%	0.00%
2030 MVMT	98,173	35,651
% of VMT Deficient in 2030	73.05%	43.90%
Growth	77.27%	92.43%

Indianapolis

Dayton



Columbus

Source: Wilbur Smith Associates, 2007

3. Corridor Conditions - Congestion through Major Cities

Table 1-2: I-70 Congestion through Major Cities (2003)

Metropolitan Area	Travel Delay (1,000 Hours)	Excess Fuel Consumed (1,000 Gallons)	Overall Congestion Cost in Million $
Kansas City, KS/MO	13,874	9,095	$ 235
St. Louis, MO/IL	39,936	26,362	$ 675
Indianapolis, IN	21,358	14,032	$ 362
Dayton, OH	4,438	2,836	$ 75
Columbus, OH	18,550	11,507	$ 314

Source: TTI Urban Mobility Report, 2004 & 2005

3. Corridor Conditions - North and Eastbound Speeds on I-70 lag behind other Midwest corridors

Figure 1-4: 30-Day Average Travel Speeds for 7 Corridors: Northbound and Eastbound

Source: American Transportation Research Institute (ATRI), June, 2006

3. Corridor Conditions - South and Westbound Speeds on I-70 lag behind other Midwest corridors

Figure 1-5: 30-Day Average Travel Speeds for 7 Corridors: Southbound and Westbound

Source: ATRI, June 2006

Lower travel speeds on I-70 impacts its utilization and “attractiveness” to the trucking industry as a cross-county route.

Figure 1-14: Estimated National Daily Truck Traffic (2035)

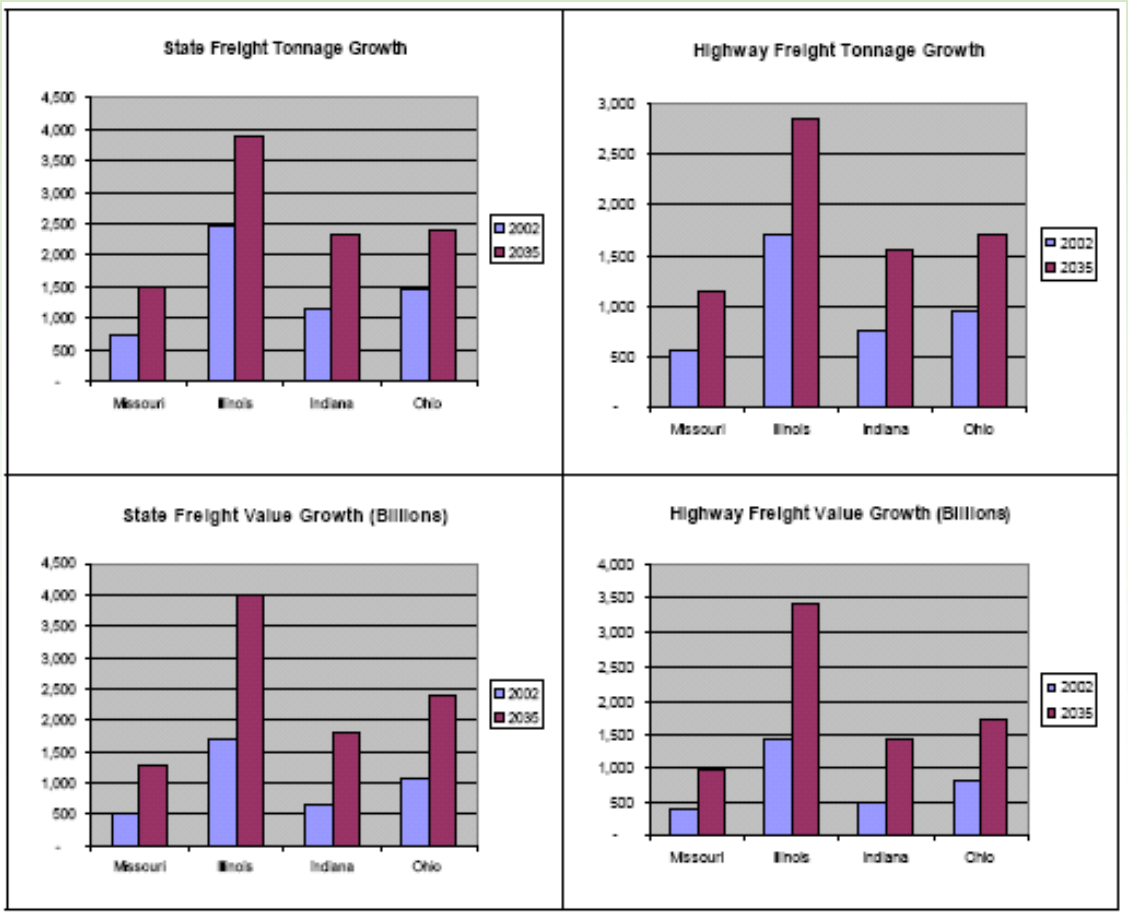
Source: FHWA Freight Analysis Framework (FAF²)

3. Corridor Conditions - Safety

In 2004 – the I-70 project area had:

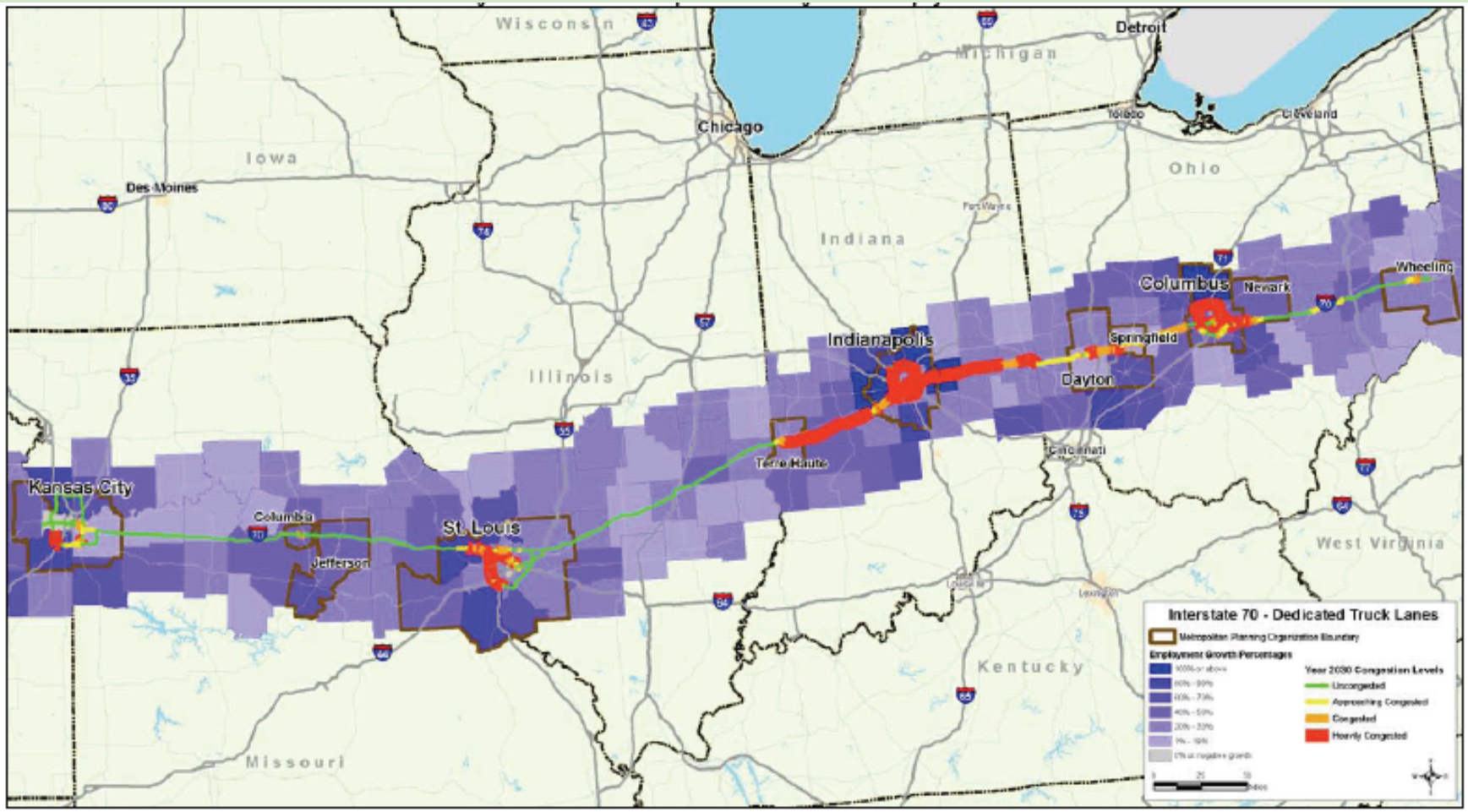
- More than 10,000 crashes
- 18 % were truck involved crashes
  - 36% of the truck involved crashes involved fatalities mainly to passenger car drivers and occupants
- 2.3 million vehicle hours of incident-induced delay

3. Corridor Conditions – Economic Growth



Source: FHWA Freight Analysis Framework (FAF²)

3. Corridor Conditions - 2030 Anticipated Congestion and Employment Growth



Source: Wilbur Smith Generated Map Utilizing 2004 HPMS and Woods and Poole 2006 CEDS Data

4. Separation as a Solution

Separating trucks from passenger cars

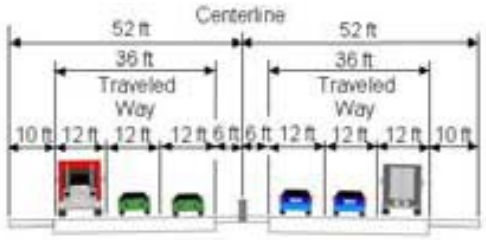
- Improves safety
  - Ex. Conflicts and fatalities will be reduced
- Reduces congestion
  - Ex. vehicles accelerate and decelerate at different speeds

5. Design and Technology - Concepts

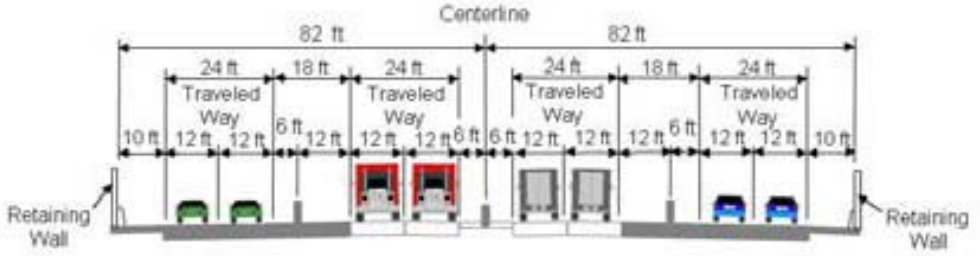
5. Design and Technology – Concepts
Technology Integration

- ITS
- Advanced Traffic Management Systems
- Traveler Information
- Emergency Management
- Weigh-in-Motion / Virtual Weigh-in-Motion
- Vehicle Infrastructure Integration (VII)
- Electronic Tolling / Congestion Pricing
- Roadside Parking

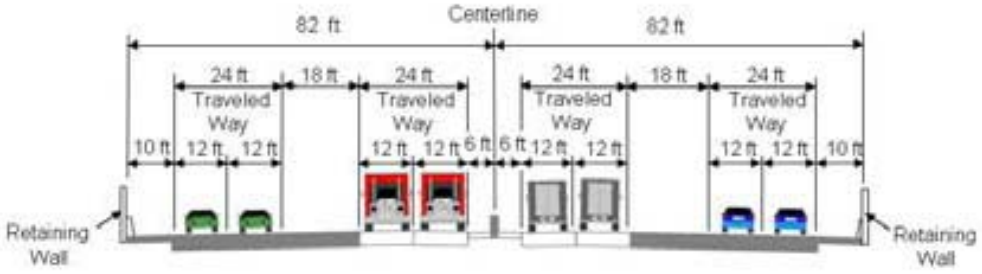
Urban Typical Section



EXISTING I-70 TYPICAL SECTION
THROUGH URBAN SEGMENTS



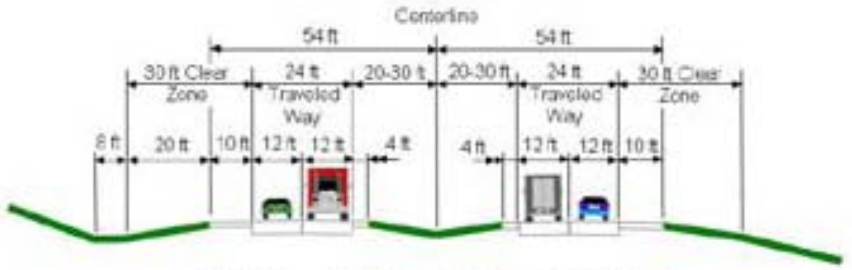
I-70 TRUCK ONLY CONCEPT TYPICAL SECTION
MEDIAN BARRIER SEPERATION



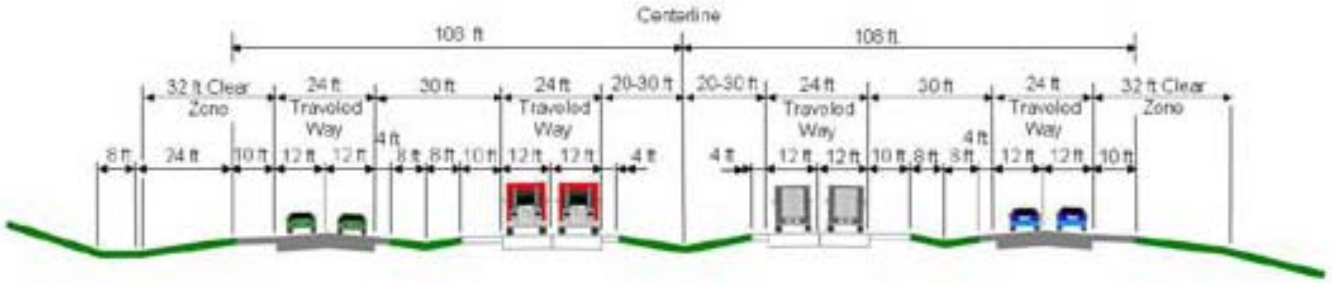
I-70 TRUCK ONLY CONCEPT TYPICAL SECTION
18 FT PAVED SEPERATION

Source: Wilbur Smith concept

Rural Typical Section



EXISTING I-70 TYPICAL SECTION
THROUGH RURAL SEGMENTS

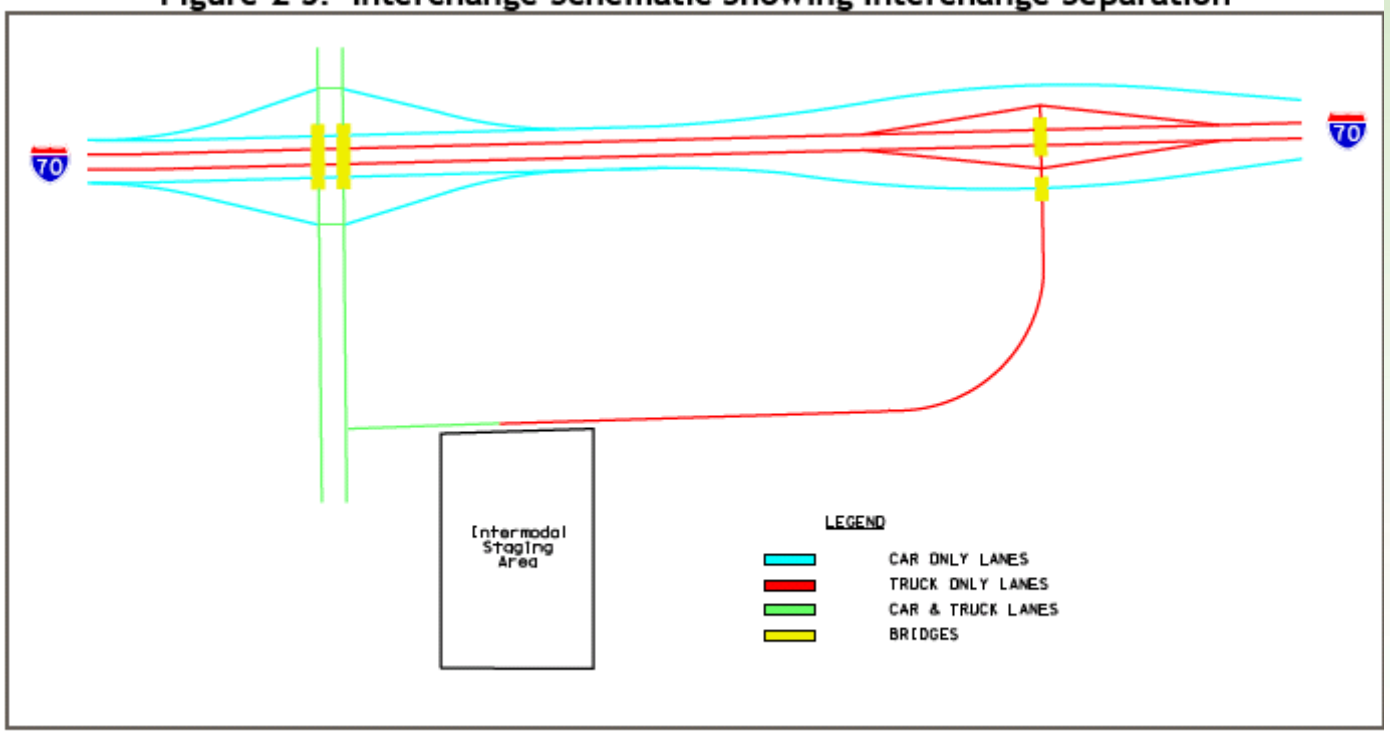


I-70 TRUCK ONLY CONCEPT TYPICAL SECTION
20 TO 30 FT GRASS MEDIAN SEPERATION

Source: Wilbur Smith concept

Interchange Concepts

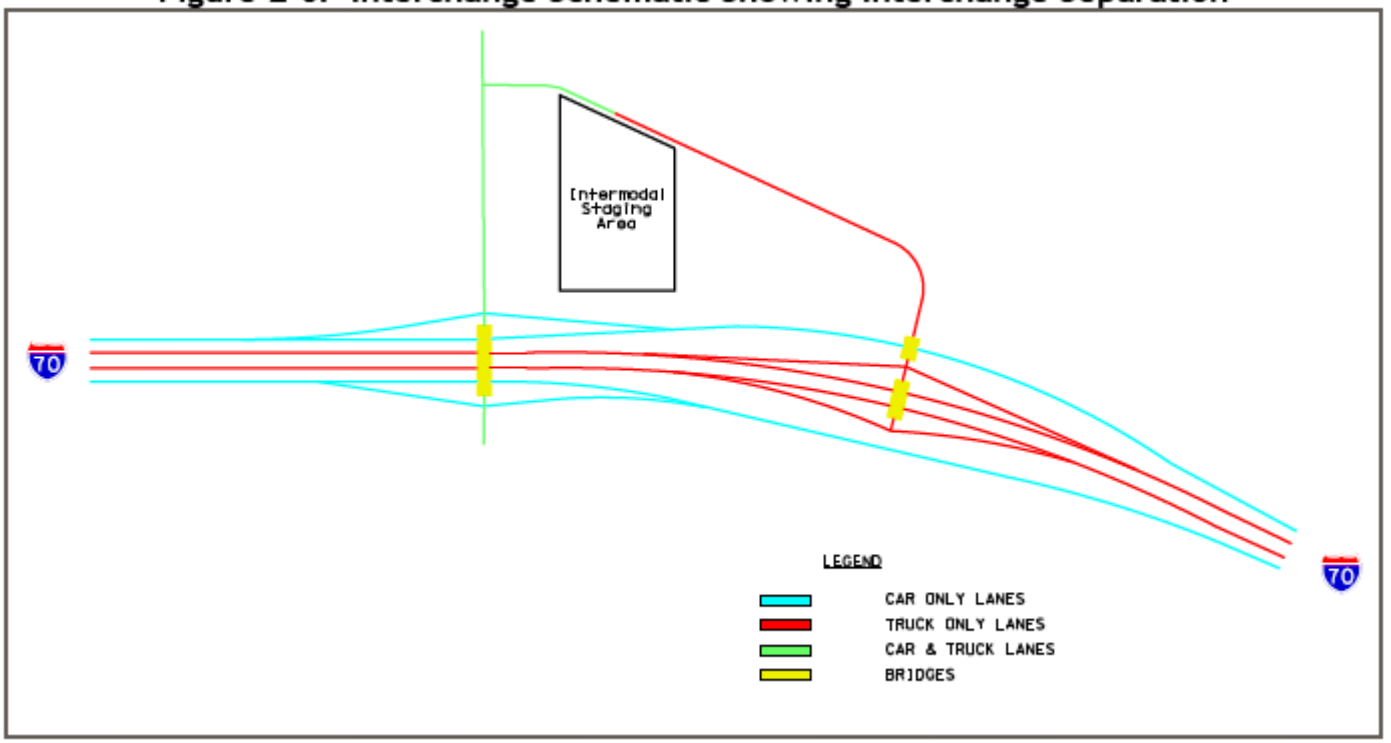
Figure 2-5: Interchange Schematic Showing Interchange Separation



Source: Wilbur Smith concept

Interchange Concepts

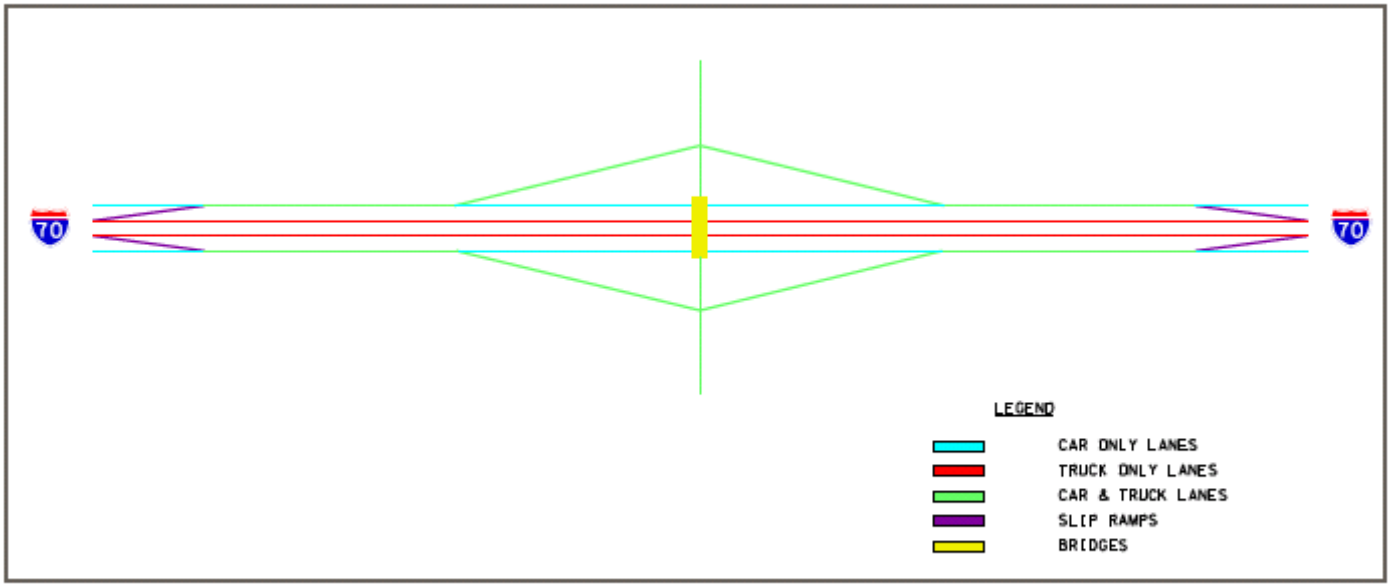
Figure 2-6: Interchange Schematic Showing Interchange Separation



Source: Wilbur Smith concept

Interchange Concepts

Figure 2-7: Interchange Schematic Showing Slip Ramp



Source: Wilbur Smith concept

6. MO, IL, IN, OH-State DOT Coalition

- DOTs were partners in submission of CFP Phase 2 Application
- Now need to:
  - Create / formalize I-70 Corridor Coalition
  - Develop Corridor of the Future Program Development Agreement (CFPDA) with all states and FHWA (similar to a MOU)
  - Agree to next steps and schedule

7. Next Steps

- Meeting with all states and FHWA
- Establish Corridor Coalition
- Identify Key Players:
  - "Blue Ribbon Panel" or "Steering Committee"
    - DOT Executives, Elected officials and MPO leaders along corridor, major businesses, trucking industry, transportation leaders, and other stakeholders
  - Staffing – "Technical Advisory Committee"
    - Representatives from DOTs, MPOs, Major cities
  - Consulting help needed
    - Determine need / role (management, coordination, technical)

7. Next Steps (continued)

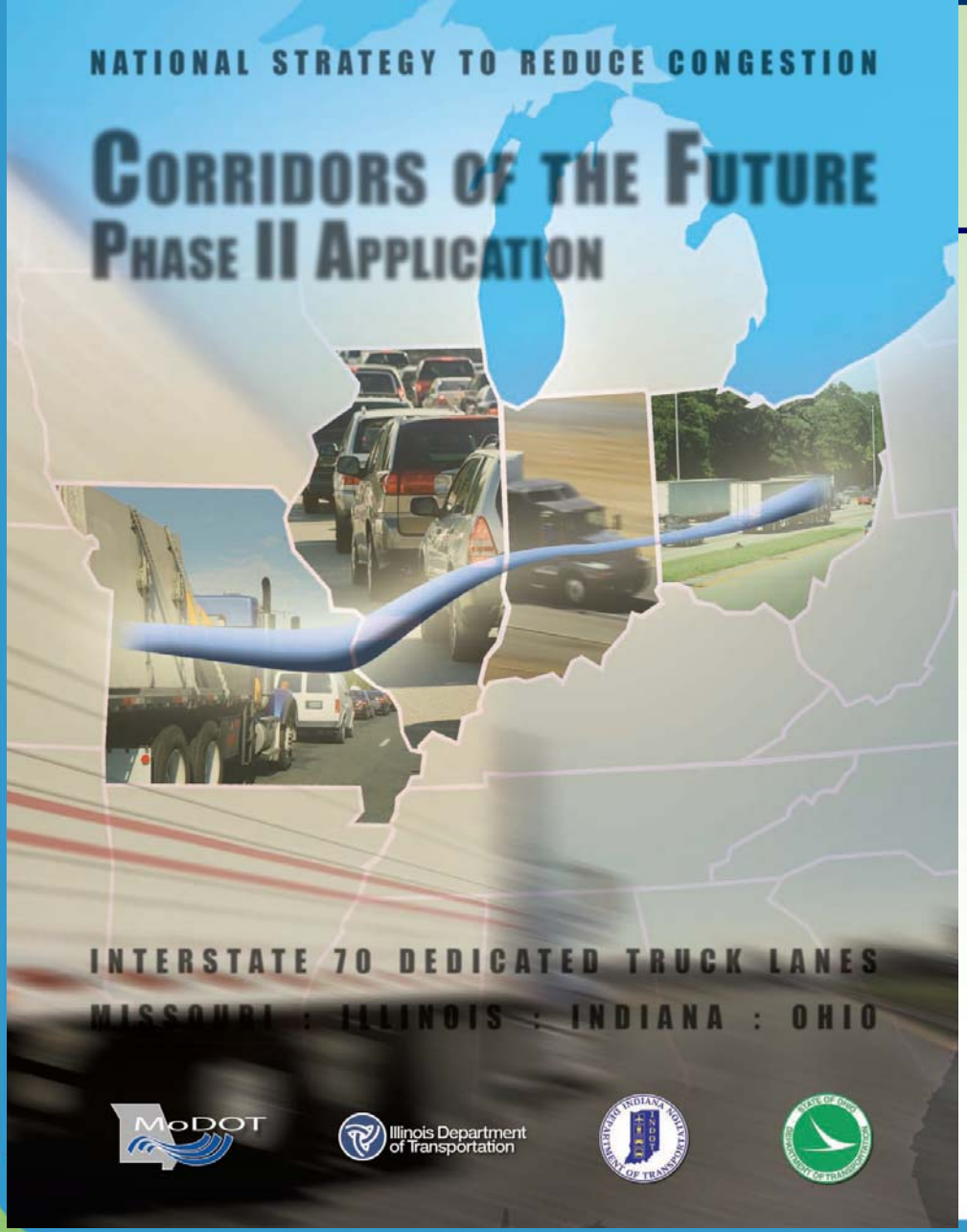
- Agree on goals and needed actions
- Agree and sign CFPDA
- Agree on use of funding
  - Feasibility study – what includes
    - Purpose and need document
    - Initial environmental analysis
    - Conceptual design – cost estimates
    - Technology integration
    - Financing options
    - Legislative changes needed
    - Public information and involvement
  - Coordination with MODOT project

Political Issues

- Financing & Funding Source(s)
  - Public-private Partnership?
  - Public Toll Road?
  - Free access roadway?
- Routing *through* metro areas
- Standardization: Size & Weight limits for LPVs
- Limited CMV access on/off facility
- No commodity and/or industry restrictions
  - Full commercial use.
- Significant land acquisition for r/w expansion

Internal Issues

- Maintaining cohesive multi-state coalition
- Consistent user assessment plan:
  - IF tolled, then single fee for use
- Standardized:
  - Weights & Lengths for LPVs
  - CMV speed limits
- Truck parking:
  - Staging & breakdown facilities
  - Public – private – shared responsibility?
  - CMV parking facilities


NATIONAL STRATEGY TO REDUCE CONGESTION
CORRIDORS OF THE FUTURE
PHASE II APPLICATION
INTERSTATE 70 DEDICATED TRUCK LANES
MISSOURI : ILLINOIS : INDIANA : OHIO
MoDOT
Illinois Department of Transportation

THANK YOU